QUARTERLY STATUS REPORT

DATE: ____1/9/04_____
PROJECT: ____Evaluation of Wildlife Crossing Structures on US Highway 93 Evaro to Polson—Phase 1: Pre-construction data collection and finalization of evaluation plan
PRINCIPAL INVESTIGATOR: Amanda Hardy, Western Transportation Institute, PO Box 174250, Montana State University, Bozeman 59717-4250; 406-994-2322 ahardy@coe.montana.edu;

ANTICIPATED PRODUCTS:

- Memo to Technical Design Committee on monitoring design considerations (completed May 2002)
- Animal-vehicle collision database (50% complete)
- Field Methods and Safety Protocol Handbook (50% complete)
- Summary of literature and existing data (30% complete)
- Memo defining the Measures of Effectiveness (50% complete)
- Long-term Research and Monitoring Evaluation Plan (50% complete)
- Phase 1 Pre-construction Case Study (30% complete)
- Pre-construction field data summary report (30% complete)
- Pre-construction black bear movement and genetics study (60% complete)

STATUS OF ACTIVITIES AND PRODUCTS (E.G., PROJECT MILESTONES, DELIVERABLES, PRODUCT DISSEMINATION, RELEVANT DIVISION ACTIVITIES) FOR THE PROJECT:

Previous Quarterly Report submitted Oct 2003. This report entails the activities from Oct 1, 2003 – December 31, 2003.

On-going Activities

- Literature search and compilation of relevant data.
- Discussions on research issues, direction, and potential partnerships with MDT research manager and district biologist, Confederated Salish and Kootenai Tribes (CSKT) tribal biologist, Montana State University and University of Montana (UM) Ecology/Wildlife Departments and GIS center, Salish Kootenai College (SKC), and Wildlife Conservation Society (WCS).
- Attendance of US 93 Technical Design Committee meetings to document decision-making process for wildlife crossings and fencing design issues for case study.

October 2003

- Continued the weekly sampling of tracking beds to October 29th (tracking session started September 26th; we have committed to sampling in 6-week sessions three

times a year in the spring, summer and fall). Collecting track bed data to estimate pre-construction wildlife crossing rates. Monitoring of the track beds so far indicates deer and bear (primary species of interest) approach the road often. Small and medium mammals more difficult to identify due to the tracking substrate (especially in dry conditions) but still able to index activity and crossing events for these general suites of species. Grass coming up from under the landscaping material is a nuisance but doesn't appear to be inhibiting the interpretation of the track events significantly.

November 2003

- Working with Whisper Maillet, WTI Graduate Fellow supported in cooperation with the Wildlife Conservation Society (WCS), with her study plan for her thesis research on US 93 wildlife crossings and animal-vehicle mortalities.
- Continued gathering resources for pellet transect population indices.

December 2003

- MSU legal council reviews Partnership Agreement for the joint WCS/WTI Native American Graduate Fellowship position.
- Data entry for the tracking bed field data completed. WTI documented tracking observations from these 62 tracking beds for 9 and 6 weeks in the summer and fall, respectively, until the tracking medium froze. During that time, the 25 tracking beds in Evaro and the 20 tracking beds in Ravalli Curves were visited once a week for a total of 15 visits. The tracking beds in Ravalli Hills were installed later than the Evaro and Ravalli Curves study areas, and the 17 tracking beds in that stretch were visited once a week for 10 visits. Across all three study areas, we recorded a total of 2193 track observations. These observations included tracks of animals approaching, leaving, and moving parallel to the road. We assumed an animal crossed the road if the animal's trajectory spanned 5 meters or less of the tracking bed length as they approached or left the road. Presence was recorded when behaviors or directional movements were indiscernible. We found tracks of black bear (no grizzly bear; hereafter we refer to black bear simply as "bear"), elk, deer, moose, mountain lion, coyotes, raccoon, rabbit, skunk, snakes, geese, and porcupine, as well as domestic cats and dogs, cattle and horses, and humans (and presumably a human entity stepping across the bed on roller-blades). There were numerous tracks of vehicles, including both US 93 travelers and people driving 4-wheelers and bicycles on the right-of-way. Regarding our study focal animals, we recorded 1115 and 94 observations of deer and black bear tracks, respectively, across the three study areas. Most of these track observations were interpreted as crossings of the road. Further summary of the data available upon request.
- Proposal to change wildlife fencing designs is presented to the US 93 TDC. WTI analyzes existing road kill and tracking data to assess how changes may affect the goals of mitigating animal-vehicle collisions and the goals of the evaluation. Report and recommendations drafted (completed and submitted to MDT, FHWA, and CSKT January 9, 2004). Report available upon request.

Summary

Bear study, road-kill data collection, tracking bed data collection protocols are all in place (traffic counts were discontinued for the winter as road tubes are not suitable with road plowing operations). Databases and quality assurance/quality control systems are established and will be documented in the Field Methods Handbook; 2003 tracking observations data entry is completed. WTI re-evaluated the amount and variability of the tracking bed data in to draft Measure of Effectiveness. In addition, we analyzed existing AVC and tracking data to address the effects of reducing wildlife fencing from the original plans as they relate to the goals of the mitigation and evaluation study. This report was finalized and submitted to the US 93 stakeholders (in the Jan 04, the next reporting quarter). WTI continues to attend TDC meetings to collaborate on monitoring design and to document decision-making processes related to wildlife mitigation for the case study.